SN: 10/689,924

Docket No. S- 99,917

In Response to Office Action dated January 13, 2006

2

## AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## LISTING OF CLAIMS:

Claim 1: (currently amended) A method for avoiding objects along a path programmed into a robot comprising the following steps in the order named:

- (a) establishing a field of view for an electronic imager of said robot along said path,
- (b) obtaining object location information in said field of view,
- (c) deriving a population coded control signal from said object location information by,

processing a population coded motion energy algorithm that

decomposes a video stream of said object location information into
spatial and temporal frequency components,

said spatial and temporal frequency components corresponding to said object and provides a velocity output, thereby identifying how said object is moving in said field of view.

processing a population coded rotation algorithm that determines if said electronic imager is turning and provides a turning information output.

SN: 10/689,924

Docket No. S- 99,917

In Response to Office Action dated January 13, 2006

3

processing a population coded translation algorithm that transforms said velocity output of said velocity algorithm into a speed signal and calculates a distance between said object and said electronic imager providing a strategic control vector and a tactical control vector, processing a population coded navigation algorithm where said strategic control vector, said tactical control vector, and said turning information output are used to derive said population coded control signal, and

(d) transmitting said <u>population coded</u> control signal to said robot, thereby allowing said robot to avoid said object.

Claim 2: (canceled)

Claim 3: (currently amended) A method for deriving a distance from an object to an electronic imager comprising the following steps in the order named:

- (a) establishing a field of view for said electronic imager,
- (b) obtaining object location information in said field of view,
- (c) deriving said distance from said object to said electronic imager by,

  processing a population coded set of algorithms processing a

  population coded motion energy algorithm that decomposes a video

  stream of said object location information into spatial and temporal

  frequency components,

processing a population coded velocity algorithm that recombines
said spatial and temporal frequency components corresponding to

SN: 10/689,924 Docket No. S- 99,917

In Response to Office Action dated January 13, 2006

4

said object and provides a velocity output, thereby identifying how said object is moving in said field of view, and processing a population coded translation algorithm that transforms said velocity output of said velocity algorithm into a speed signal and calculates said distance between said object and said electronic imager.

Claim 4: (canceled)